

## Launch Mission Execution Forecast

**Mission:** Falcon 9 Starlink 4-12

**Issued:** 17 Mar 2022 / 0830L (1230Z)

**Valid:** 18 Mar 2022 / 2314 – 0043L (19/0314 – 0443Z)



**Forecast Discussion:** An area of low pressure will accelerate northeastward from southern Oklahoma into the northeastern states through the remainder of the week. As this happens, an associated cold front will move across the Gulf Coast states, reaching the western part of the Florida panhandle by the beginning of the launch window. Onshore flow will prevail over the Spaceport, resulting in scattered showers over the ocean with some likely moving inland. Therefore, the primary concern for launch day is the Cumulus Cloud Rule.

In the event of a 24-hour delay, the front is expected to make only minimal eastward progression across the Florida peninsula. Low level winds are forecast to switch to a west to southwest direction. While the main front is well north of the area, computer models are indicating a weak convergence boundary will develop near the Space Coast. This boundary may be the focus for additional shower development on Saturday. The primary concern for the back-up day is the Cumulus Cloud Rule.

Launch Day	Probability of Violating Weather Constraints <sup>1</sup>						
	30%	Primary Concerns: Cumulus Cloud Rule					
	Weather Conditions					Additional Risk Criteria <sup>2</sup>	
	Weather/Visibility: Sct Shwrs / 7 mi.		Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear: Low
	Temp/Humidity: 68°F / 97%		Cumulus	Scattered	2,500	12,000	Booster Recovery Weather: Low
	Liftoff Winds (200'): 180° 15 - 20 mph						Solar Activity: Low
24-Hour Delay	Probability of Violating Weather Constraints						
	30%	Primary Concerns: Cumulus Cloud Rule					
	Weather Conditions					Additional Risk Criteria	
	Weather/Visibility: Isold Shwrs / 7 mi.		Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear: Low
	Temp/Humidity: 69°F / 100%		Cumulus	Scattered	2,500	12,000	Booster Recovery Weather: Moderate to High
	Liftoff Winds (200'): 240° 12 - 17 mph						Solar Activity: Low
Notes	<div>1. The Probability of Violation (PoV) is the chance of a local safety or customer constraint violation occurring anytime during the launch window.</div> <div>2. Additional Risk Criteria, which are not included in the PoV, are mission-specific constraints that may not include all phenomena within each risk factor.</div> <div>See <a href="https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf">https://www.patrick.spaceforce.mil/Portals/14/Weather/LaunchFAQ.pdf</a> for more information</div>						
<b>Note:</b> The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.							
Next Forecast Will Be Issued		18 MAR 2022					